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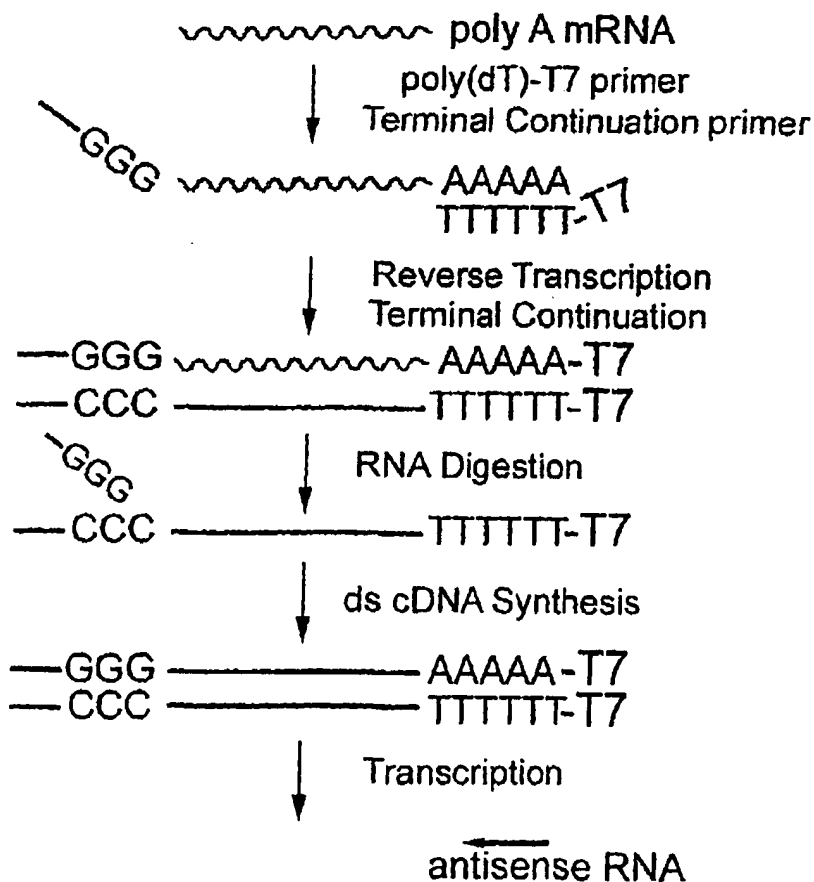
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[Continued on next page]

(54) Title: METHODS AND COMPOSITIONS OF AMPLIFYING RNA



(57) Abstract: The present invention pertains to a method that will increase the efficiency of second strand cDNA synthesis through a mechanism of "terminal continuation" before further RNA amplification by RNA transcription using, for example, a bacteriophage promoter. In a specific embodiment, a transcription promoter is attached to the 5' region of cDNA through the same mechanism of "terminal continuation". Genetic signals are subsequently amplified in a linear manner through RNA transcription. In specific embodiments, the orientation of the transcribed RNA is either sense or antisense, depending on the desired downstream application. In other embodiments, the present invention pertains to methods for extraction and amplification of RNA, particularly mRNA, from histologically stained tissues and cells.



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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : C12Q 1/68; C12P 19/34

US CL : 435/6, 91.1, 91.2, 91.21

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 435/6, 91.1, 91.2, 91.21

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPAT, PGPUB, DERWENT WPI, MEDLINE, BIOSIS

search terms: RNA, amplify, promoter, primer, transcription, tissue, stain

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 5,962,272 A (CHENCHIK et al.) 05 October 1999, Figs. 1-4.	63-71 ----- 1-35,57,58, 72-79
Y	US 5,399,491 A (KACIAN et al.) 21 March 1995, Figs. 1-4.	1-35,57,58, 72-79
X -- Y	SAITO et al. Detection of Hepatitis C Virus RNA sequences in hepatocellular carcinoma and its precursors by microdissection polymerase chain reaction. Arch. Pathol. Lab. Med. April 1997, Vol. 121, pages 400-403, especially pages 400-401.	36-42 ----- 43-62

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubt on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"A"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
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